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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 15144-2020

Replacing GB/T 15144-2009

**AC and/or DC-supplied electronic control gear for tubular
fluorescent lamps - Performance requirements**

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard replaces GB/T 15144-2009 "Performance Requirements for AC Electronic Ballasts for Tubular Fluorescent Lamps", and is in line with GB/T 15144-2009

Compared with.2009, the main technical changes are as follows.

--- Increased the scope of DC electronic control devices for tubular fluorescent lamps (see

Chapter 1, Chapter 1 of the.2009 edition);

---Modified the normative references (see Chapter 2, Chapter 2 of the.2009 edition);

--- The terms "calibration current of reference ballast", "high power factor ballast", "high acoustic impedance ballast" and "pre-start time" are deleted.

Between" (see 3.5, 3.8, 3.9, 3.12 in the.2009 edition);

--- Added the terms "electronic control device life" and "ambient temperature" (see 3.9, 3.10);

---Added the life information of the control device (see 5.2 and Table 1);

--- Deleted the mandatory energy efficiency rating on the ballast (see 5.1 in the.2009 edition);

---Modified the requirements of the open circuit voltage regarding the voltage peak value (see 7.2.3, 7.1.2 of the.2009 edition);

--- Deleted the energy efficiency rating (see 8.3 in the.2009 edition);

---Modified the requirements for the heating and control interface of the lamp cathode in the dimming requirements (see 8.3, 8.4 in the.2009 edition);

---Added the operating conditions of the control device near the end of the lamp life (see 14.3);

---Modified durability (see Chapter 15, Chapter 15 of the.2009 edition);

---The measurement of energy efficiency rating has been deleted (see A.4 in the.2009 edition);

--- The use of digital signals for control has been deleted (see E.4 of the.2009 edition);

--- Deleted Appendix F (see Appendix F of the.2009 edition);

--- Deleted Appendix G (see Appendix G of the.2009 edition);

--- Added examples of suitable test devices for SoS and CV testing (see Appendix F);

--- Added graphical examples of SoS-CV testing (see Appendix G).

This standard uses the translation method equivalent to the IEC 60929.2015 "Performance of AC and/or DC Electronic Control Devices for Tubular Fluorescent Lamps"

Claim".

The Chinese documents that have a consistent correspondence with the international documents cited in this standard are as follows.

---GB/T 10682-2010 double-capped fluorescent lamp performance requirements (IEC 60081.2005, NEQ);

---GB/T 17262-2011 single-ended fluorescent lamp performance requirements (IEC 60901.2007, NEQ);

---GB 19510.1-2009 Lamp control device Part 1.General requirements and safety requirements (IEC 61347-1.2007, IDT);

---GB 19510.4-2009 Lamp control device Part 4.Special requirements for AC electronic ballasts for fluorescent lamps

(IEC 61347-2-3.2000, IDT);

---GB/T 30104 (all parts) digital addressable lighting interface [IEC 62386 (all parts)].

This standard also made the following editorial changes.

---Deleted two notes in Chapter 12 and 15.2 that have nothing to do with our country.

This standard was proposed by the China National Light Industry Council.

This standard is under the jurisdiction of the National Lighting Standardization Technical Committee (SAC/TC224).

Drafting organizations of this standard. National Electric Light Source Quality Supervision and Inspection Center (Beijing), CITIC Schneider Intelligent Building Technology (Beijing) Co.

Company, Zhejiang Shangguang Lighting Co., Ltd.

1 Scope

This standard specifies the performance requirements of electronic control devices for tubular fluorescent lamps. The electronic control device is used when the voltage does not exceed 1000V,

AC power supply and/or DC power supply with a frequency of 50Hz or 60Hz, its working frequency is different from the frequency of the power supply, and the matching used is consistent

Fluorescent lamps meeting the requirements of IEC 60081 and IEC 60901 and other high-frequency fluorescent lamps.

Note 1.The tests described in this standard are all type tests. Does not include test requirements for individual control devices during production.

Note 2.For final products such as lamps and stand-alone control devices, there are specific standards for power supply current harmonics and immunity specifications. in this aspect,

The control device in the lamp plays a major role. The control device and other components

should meet these standards.

Note 3. The requirements for the digital addressable lighting interface of electronic control devices are given in IEC 62386.

2 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version applies to this article

Pieces. For undated references, the latest version (including all amendments) applies to this document.

IEC 60081.2010 Double-capped fluorescent lamps-Performancespecifications)

IEC 60901.2007 Performance requirements for single-capped fluorescent lamps (Single-cappedfluorescentlamps-Performancespecifications)

IEC 61347-1.2010 Lamp control gear Part 1.General requirements and safety requirements (Lampcontrolgear-Part 1. Generalandsafetyrequirements)

IEC 61347-2-3..2006 Lamp control device Part 2-3.Special requirements for AC electronic ballasts for fluorescent lamps (Lamp controlgear-Part 2-3.Particularrequirementsfora.c.suppliedelectronicbalastsforfluorescent lamps)

IEC 62386 (all parts) Digital addressable lighting interface (Digitaladdressablelightinginterface)

IEC TR62750.2012 Fluorescent lamp dimming standard calculation (Unifiedfluorescentlampdimmingstandardcalculations)

3 Terms and definitions

The following terms and definitions apply to this document.

3.1

Starting aid

A conductive strip fixed on the outer surface of the lamp, or a conductive plate keeping a